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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,010	10/16/2003	Richard D. Breault	C-3151	7400

7590 01/25/2006  
M. P. Williams  
210 Main Street  
Manchester, CT 06040

EXAMINER

MERCADO, JULIAN A

ART UNIT PAPER NUMBER

1745

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/687,010

Applicant(s)

BREault, RICHARD D.

Examiner

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Remarks*

This Office action is responsive to applicant's amendment filed November 10, 2005.

### *Drawings*

The objection to the drawings under 37 CFR 1.83(a) has been withdrawn.

### *Claim Rejections - 35 USC § 112*

The rejection of claims 2-4 under 35 U.S.C. 112, first paragraph has been obviated.

(new rejection)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-4 have been amended to recite, *inter alia*, that the manifolds and insulator panels correspond with the mass times heat capacity, external surface area and water inventory of said fuel cell stack. The claims are indefinite, however, as to *how* or *in what aspect* the manifolds and insulator panels are in correspondence with the mass times heat capacity, external surface area or water inventory of the fuel cell stack. (emphasis added) Essentially, the claims as

Art Unit: 1745

currently amended recite a structural feature (such as the manifolds or insulator panels) that somehow corresponds with a physical property (such as the mass times heat capacity or external surface area) or amount of water in the fuel cell. Thus, the claims are indefinite.

It is suggested to revert back to recite that said manifolds and said insulator panels --are selected in correspondence--, as applicant's current amendment does not obviate the process-of-using interpretation for this feature and instead has raised the present 35 U.S.C. 112, second paragraph issue for indefiniteness.

Claim 3 as submitted in the November 10, 2005 version of the claims (which effectively replaces the prior October 16, 2003 version) appears to have omitted the last three lines of the claim (referring to the October 16, 2003 version). The claim is therefore indefinite.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Katz et al. (U.S. Pat. 4,548,874).

The rejection is maintained for the reasons of record. Applicant's arguments have been fully considered, however they are not found persuasive.

Applicant's allegation for inconsistencies in the detailed discussion is noted.

Specifically, applicant submits that "the Examiner cannot define the reactant gas manifold as

Art Unit: 1745

element 17 and in the same sentence (or otherwise in the same rejection) define a gas-filled panel as element 17. The examiner completely agrees with applicant's premise; for a rejection to be proper, and in particular one which is applied towards an apparatus claim such as instant claim 1, the prior art reference must show a one-to-one correspondence of features which are held readable on applicant's claimed invention. The examiner asserts, however, that the alleged inconsistencies in the prior Office action are not inconsistencies and are in fact consistent with the disclosure of the reference itself. Indeed, independent claim 1 recites, *inter alia*, at least one reactant gas manifold... comprising a gas-filled panel (GFP). That is, the gas-filled panel is part of the reactant gas manifold. Similarly, reference character [17] in Katz et al. refers to the reactant gas manifold which also comprises a gas-filled panel.

As to there being no allegation in the present rejection for the claimed vacuum insulated panel or gas filled panel (claim 1) or for the claimed vacuum or low thermal conductivity gas, vacuum insulated panel or gas filled panel (claim 5), applicant is reminded that citations to the reference relied upon is provided as a courtesy and is not an exclusive nor exhaustive citation to the reference, which is relied upon in its entirety including the corresponding Figures. .

Applicant is noted to have cited MPEP 2131 with the assertion that the reference must "teach every element of the claim," yet not a single argument against the Katz et al. reference itself is presented for the examiner's consideration. Indeed, the prior Office action set forth that a gas-filled panel [17] is disposed external to a single wall [25], while Katz et al. specifically teaches that this "gas supply manifold or plenum 17 with edge surfaces 19 [is] in sealing engagement with a face 21 of the cell stack." See col. 3 line 1-3. As to an insulator panel on an external surface of each end plate, Figure 1 is asserted to show that the insulator panel [29] is in direct

Art Unit: 1745

contact with endplates [13] and [15]. In view of the foregoing, the examiner concedes that no allegations were made in the prior Office action, as the teachings of Katz et al. were applied towards the claims not as alleged teachings but instead as assertions of fact taken directly from the Katz et al. reference.

Notwithstanding the 35 U.S.C. 112, second paragraph rejection (discussion above), the examiner maintains that to what extent the claimed manifolds and insulator panels (somehow) correspond with the mass times heat capacity, *inter alia*, has not been given patentable weight as these features are maintained as being drawn to process-of-using limitations, i.e. these features correspond... so that the water in the stack is not frozen. These process-of-using limitations are maintained to fail to further limit or give patentable scope to the claimed fuel cell stack. If applicant intends to now recite a functional limitation, applicant is reminded that the apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). However, for the reasons stated above under 35 U.S.C. 112, second paragraph, the claims are unclear as to how the structural feature of the manifolds or insulator panels correspond with the mass times heat capacity or external surface area or amount of water in the fuel cell.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 1745

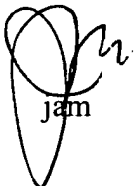
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



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PATRICK JOSEPH RYAN  
SUPERVISORY PATENT EXAMINER